Exercises

Mod 2: Master Menu

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1. Change the working data set to the oldest data set.

2. Where are the gridded forecasts edited?

3. Which icon refers to GFE?

4. Which icon calls up the slider bars?

5. You're looking for either ICS or IGR

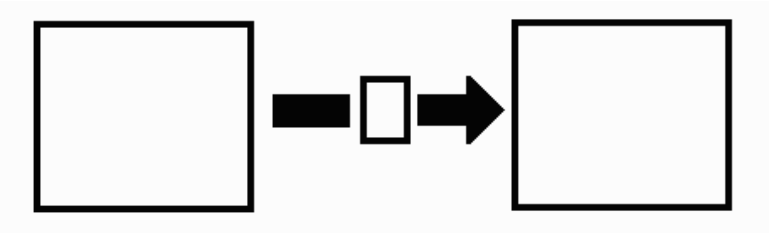
6. You want to change the zone combination.

7. I keep clicking on a destination icon but it won't update. What could be the problem?

8.

9. What is the purpose of the data flow arrows and traffic lights?

10. Place the appropriate word (Source / Destination) in the correct box at each end of the data flow arrow.



11. What does a red traffic light tell you about source and destination data set modification?

12. Will the destination data set be updated by the source if the traffic light is red?

13. What does a yellow traffic light tell you about source and destination modification?

14. Will the destination data set be updated by the source if the traffic light is yellow?

15. What does a green traffic light tell you about the modification of the source and destination data set?

16. Will the destination data set be updated by the source if the traffic light is green?

17. What are the three icons that have two data flow arrows and traffic lights pointing to them from two different source data sets?

18. Take a look at the Models icon and the Models-to-Grids data flow arrow. Why is this traffic light different and the Models icon kind of set apart from the rest of the icons?

19. Do you normally have to change the color of traffic light?

20. Manually change a traffic light.

21. Does the traffic light color retain its meaning if you manually change the color?

Exercises

Mod 3: GFE Components, Introduction

Complete the following exercises in the order shown:

1. Open the GFE display from the Master Menu.

2. Identify the Components of the GFE Display.

3. From the Main Menu draw down the Sub menus and get an idea of what the sub-functions do.

4. Switch to the Temporal Editor through the Grid Manager button on the button bar.

5. Familiarize yourself with the control functions of the Spatial editor. Try the following:
   a. Animate a selected weather element using the buttons in the button bar.
   b. Display a weather element as a graphic and image through the legends Pop-up menu
   c. Toggle the legends through the legends Pop-up menu.
   d. Toggle grid visibility using MB1.
   e. Toggle the grid edit state using MB2.
   f. Changing the Spatial editor using the grid manager.
   g. Make a grid visible and editable via the grid manager.
   h. Zoom in to your CWA and Pan across the counties.
   i. Animate and overlay images using the accelerator keys

6. In the Grid manager, what do the edit states in a grid block represent? (i.e. I, I, o, e)

7. Select a weather element in the grid manager and perform the following:
   (1) Undo
   (2) Delete Grid
   (3) Fragment Grid
   (4) Assign default value
   (5) Copy Grid
   (6) Paste Grid
   (7) Display Attributes
   (8) Display info
   (9) Deselect All
   (10) Create from scratch

Exercises

Mod 4: Ingest and Modification of Weather Elements

1. Import a single weather element into the forecast database. After that, load several elements.

2. Create a weather element group and then load it.

3. Copy the NGM model into the forecast database using the *"Copy All Grids From..." function.*

4. Copy the AVN model into the forecast database using the *"Copy All Grids From..."* function.

5. Copy the ETA model into the forecast database using the *"Copy All Grids From..."* function.

6. Select an element and a time period. Load using the "Copy Selected Grids From..." function.
   - only the grid and time period should not be loaded.

7. Practice using the Grids functions:
   - Interpolate
   - Delete Grids
   - Split Grids
   - Fragment Grids (stretch a grid first)
   - Assign Default Value
   - Select Grids by Time
   - Select All Weather Elements
   - Deselect All
   - Time Shift Weather Elements
   - Select Time Range
   - Find Weather Element

Exercises

Mod 5-1: Editing, the Spatial Editor

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1. Create an edit area by hand. Save it as a Quick set and as a named edit area.

2. Select an homogenous edit area based on temperature using the "Edit Area and Query Dialog."

3. Select an homogeneous edit area based on a value (e.g. T).
   a. Try using MB3 to get started
   b. Then adjust the fuzz value so a wider temperature range and edit area is selected

4. Select an edit area encompassing a few counties. Save it under a name and under a new group. You pick the names

5. Delete the edit area and group created in #4.

6. Select an edit area based on elevation. Then select the same area but within the confines of your CWA
   a. Make a query with elevation (I used the mesoeta topo from the D2D data set)
   b. Intersect with the TFX CWA
   c. Hint: save each search first, then simply intersect the saved search names

7. Create a Td grid from scratch and and insert a few contours (any values)
   a. Increase or decrease the density of the contours
   b. Add a contour
   c. Delete a contour
   d. Adjust an existing contour
   e. Use the Pencil tool to adjust the position of the contours
   f. Solution:
      i. Delete a current grid or select a blank grid
      ii. MB3 to "Create from Scratch"
      iii. Use the Contour Tool, MB3 to Calculate Grids

8. Move/Copy an edit area from one location to another
   a. Try both and note the difference between the original edit area as the move or copy is completed
   b. In the "real world" why would this action be useful?

9. Create and save a sample set for all your TAF locations

a. Use the sample tool “32"
b. Chose menu item: Maps->Sample->Save
c. Delete this sample

Exercises

Mod 5-2: GFE Components, Editing

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1. Using the temporal editor, adjust T or Td grids to reflect a 5 to 10 degree increase through the first 24 hours. Interpolate the data so all hours are accounted for through the first 24 hours.

2. Adjust the wind field by increasing the wind speed by 10 knots and changing the wind direction by 90 degrees for the same time period as above in exercise

3. Edit Weather Data. Still using the same edit area as before, Select a Wx grid element through the temporal editor (any time will do just so there's some weather going on.)
   a. Change the wx type (e.g. from Rain to Fog)
   b. Now add (combine) a weather type to what is Already occurring

4. Edit scalar data in absolute mode. Go to the main menu. Select GFE -->> Editing Preferences -->> Click off the yellow box (this will put you in absolute mode). Repeat exercise 1. What is different?

5. Select a T grid to edit. Select an edit area. Then through the edit actions button, adjust the value up and down and then assign a new value to the area. (use the edit action dialogue)

6. Do the same things in exercise 5 but this time select a time range to edit.